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10/743,940	12/23/2003	Richard C. Caponi	SPIROL/111/US	9382

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EXAMINER	
FERGUSON, MICHAEL P	
ART UNIT	**PAPER NUMBER**
3679	

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/743,940	CAPONI, RICHARD C.	
	Examiner	Art Unit	
	Michael P. Ferguson	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-6 and 8-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-6 and 8-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 11 is objected to because of the following informalities:

Claim 11 (line 2) recites ".02mm to .1mm". It should recite --0.02 mm to 0.1 mm--.

For the purpose of examining the application, it is assumed that appropriate correction has been made.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1,4,8,15,16,18-20,22 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 (lines 1-6) recites "A pin... comprising... said lands being at least partially formed from pin material displaced from said grooves... said pin is formed from cylindrical stock having a first diameter". It is unclear as to whether a structure claim claiming a pin, or a method claim claiming a method of making a pin is being positively claimed. For the purpose of examining the application, it is assumed that a structure has been claimed in claim 1. Claims 4,8,22 and 23 are likewise rejected for reciting "said first diameter".

Claim 15 (line 1) recites "The pin and substrate combination... wherein said pin is formed from cylindrical stock having a third diameter". It is unclear as to whether a structure claim claiming a pin and substrate combination, or a method claim claiming a

method of making a pin is being positively claimed. For the purpose of examining the application, it is assumed that a structure has been claimed in claim 15. Claims 16,18,19 are likewise rejected for reciting "said third diameter".

Claim 20 (line 1) recites "The pin and substrate combination... wherein said lands are at least partially formed from pin material displaced from said grooves". It is unclear as to whether a structure claim claiming a pin and substrate combination, or a method claim claiming a method of making a pin is being positively claimed. For the purpose of examining the application, it is assumed that a structure has been claimed in claim 20.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1,4,6,8-10,12 and 15-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Kerb-Konus-Vertriebs (DE 2 243 564).

As to claim 1, Kerb-Konus-Vertriebs discloses a pin for insertion in a hole in a host material, comprising:

an elongated cylindrical body **1** constructed from a substantially homogeneous material, the body having a longitudinal axis and a formed portion providing a retaining surface that engages an inside surface of the hole;

the retaining surface defined by a plurality of helical lands **5** having a width separated by a plurality of helical grooves **2** of approximately (near the value of) equal width,

wherein the retaining surface has a second diameter, a majority of each land having a substantially uniform height (Figures 1 and 2; page numbered 4 at top, lines 3-5).

Applicant is reminded that **process limitations are given little patentable weight in product claims**. The patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

As to claim 4, Kerb-Konus-Vertriebs discloses a pin having a second diameter.

Applicant is reminded that **process limitations are given little patentable weight in product claims**. The patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

As to claim 6, Kerb-Konus-Vertriebs discloses a pin wherein the lands **5** have a surface area that is approximately 40% of a surface area of the formed portion (Figure 1).

As to claim 8, Kerb-Konus-Vertriebs discloses a pin wherein a majority of each of the lands **5** has a substantially uniform height.

Applicant is reminded that **process limitations are given little patentable weight in product claims**. The patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

As to claim 9, Kerb-Konus-Vertriebs discloses a pin wherein a majority of each land **5** is a cylindrical surface parallel to and having a substantially uniform radial displacement from the longitudinal axis (Figure 2).

As to claim 10, Kerb-Konus-Vertriebs discloses a pin and substrate combination comprising:

a substrate having a first hardness and defining a hole having a first diameter; and

a pin for insertion into the hole, the pin having a second hardness less than the first hardness (pin deforms since, inherently, the second hardness is less that the first hardness of the substrate; page numbered 2 at top, lines 8-10, page numbered 3 at top, lines 17-19, page numbered 5 at top, lines 16-18) and a retaining surface at a second diameter larger than the first diameter, the retaining surface defined by a plurality of lands **5** having a width separated by a plurality of grooves **2** of approximately (near the value of) equal width,

wherein a portion of each land includes a cylindrical surface parallel to the longitudinal axis at a substantially uniform radial distance from the longitudinal axis (Figures 1 and 2).

As to claim 12, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein the lands **5** and the grooves **2** are helical (Figure 1).

As to claim 15, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein the pin comprises a second diameter.

Applicant is reminded that **process limitations are given little patentable weight in product claims**. The patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

As to claim 16, Kerb-Konus-Vertriebs fails to disclose a pin and substrate combination wherein the pin comprises a second diameter.

Applicant is reminded that **process limitations are given little patentable weight in product claims**. The patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

As to claim 17, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein the retaining surface is carried on a formed portion of the pin and the lands **5** have a surface area which is approximately 40% of a surface area of the formed portion (Figure 1).

As to claim 18, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein a majority of each of the lands **5** has a substantially uniform height.

Applicant is reminded that **process limitations are given little patentable weight in product claims**. The patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

As to claim 19, Kerb-Konus-Vertriebs fails to disclose a pin and substrate combination wherein a majority of each of the lands has a substantially uniform height.

Applicant is reminded that **process limitations are given little patentable weight in product claims**. The patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

As to claim 20, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein lands **5** are partially formed.

Applicant is reminded that **process limitations are given little patentable weight in product claims**. The patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

As to claim 21, Kerb-Konus-Vertriebs discloses a pin for insertion in a hole in a host material and frictional retention therein, comprising:

an elongated cylindrical body **1** having a longitudinal axis, a cylindrical pilot portion **3,4**, and a retainer portion defined by a plurality of alternating helical lands **5** and grooves **2**, wherein the lands provide a retaining surface for engaging an inside surface of the hole;

the retaining surface being a radial distance from the axis that is greater than a radius of the pilot portion and occupying approximately 40% of the circumference of the retainer portion when the retainer portion is viewed in cross section perpendicular to the axis (Figures 1 and 2).

As to claim 22, Kerb-Konus-Vertriebs discloses a pin comprising a cylindrical pilot portion **3,4** intermediate the formed portion and an end of the pin (Figure 1).

Applicant is reminded that **process limitations are given little patentable weight in product claims**. The patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on

its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

As to claim 23, Kerb-Konus-Vertriebs discloses a pin having opposed ends and comprising a cylindrical pilot portion **3,4** intermediate the formed portion and each of the ends (Figure 1).

Applicant is reminded that **process limitations are given little patentable weight in product claims**. The patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 11 and 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kerb-Konus-Vertriebs.

As to claim 11, Kerb-Konus-Vertriebs fails to disclose a pin and substrate combination wherein the second diameter is 0.02 mm to 0.1 mm larger than the first diameter.

Applicant is reminded that a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a pin and substrate combination as disclosed by Kerb-Konus-Vertriebs to wherein the second diameter is 0.02 mm to 0.1 mm larger that the first diameter as such practice is a design consideration within the skill of the art.

As to claim 14, Kerb-Konus-Vertriebs fails to disclose a pin and substrate combination wherein the first hardness is approximately 10 points higher on the Rockwell Rc scale than the second hardness.

The applicant is reminded that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a combination as disclosed by Kerb-Konus-Vertriebs wherein the first hardness is approximately 10 points higher on the Rockwell Rc scale than the second hardness as such practice is a design consideration within the skill of the art.

8. Claims 2,5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerb-Konus-Vertriebs in view of Highfield (Re. 34,928).

As to claim 2, Kerb-Konus-Vertriebs fails to disclose a pin wherein the lands are oriented at an angle of approximately 45° relative to the longitudinal axis.

Highfield teaches a pin wherein lands **40** are oriented at an angle of approximately 45° relative to a longitudinal axis; the orientation of the lands ensuring particularly good performance and a particularly good interlocking fit between the lands and a substrate (Figure 2, column 2 lines 18-28). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a pin as disclosed by Kerb-Konus-Vertriebs to wherein lands are oriented at an angle of approximately 45° relative to a longitudinal axis as taught by Highfield in order to ensure particularly good performance and a particularly good interlocking fit between the lands and a substrate.

Furthermore, the applicant is reminded that a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

As to claim 5, Kerb-Konus-Vertriebs fails to disclose a pin wherein the helical grooves and lands are oriented at an angle of approximately 45° relative to an axis of the pin.

Highfield teaches a pin wherein helical grooves and lands **40** are oriented at an angle of approximately 45° relative to an axis of the pin; the orientation of the lands ensuring particularly good performance and a particularly good interlocking fit between the lands and a substrate (Figure 2, column 2 lines 18-28). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a pin as disclosed by Kerb-Konus-Vertriebs to wherein the helical grooves and lands are oriented at an angle of approximately 45° relative to an axis of the pin as

taught by Highfield in order to ensure particularly good performance and a particularly good interlocking fit between the lands and a substrate.

Furthermore, the applicant is reminded that a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

As to claim 13, Kerb-Konus-Vertriebs fails to disclose a pin and substrate combination wherein the lands and the grooves have an angle of approximately 45° relative to an axis of the pin.

Highfield teaches a pin and substrate combination wherein lands **40** and grooves have an angle of approximately 45° relative to an axis of the pin; the orientation of the lands ensuring particularly good performance and a particularly good interlocking fit between the lands and a substrate (Figure 2, column 2 lines 18-28). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a pin as disclosed by Kerb-Konus-Vertriebs to wherein the lands and grooves have an angle of approximately 45° relative to an axis of the pin as taught by Highfield in order to ensure particularly good performance and a particularly good interlocking fit between the lands and a substrate.

Furthermore, the applicant is reminded that a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Response to Arguments

9. Applicant's arguments filed December 7, 2005 have been fully considered but they are not persuasive.

As to claim 1, Attorney argues that:

Kerb-Konus-Vertriebs does not disclose a pin *wherein the pin is formed from cylindrical stock having a first diameter and the retaining surface has a second diameter larger than the first diameter, a majority of each land having a substantially uniform height extending above the first diameter and the width of at least one land is at least approximately five times the height.*

Examiner disagrees. As to claim 1, Kerb-Konus-Vertriebs discloses a pin wherein the retaining surface has a second diameter, a majority of each land having a substantially uniform height (Figures 1 and 2; page numbered 4 at top, lines 3-5).

Applicant is reminded that **process limitations are given little patentable weight in product claims**. The patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

As to claim 10, Attorney argues that:

Kerb-Konus-Vertriebs does not disclose a pin and substrate combination comprising a pin *having a second hardness less than the first hardness.*

Examiner disagrees. As to claim 10, Kerb-Konus-Vertriebs discloses a pin and substrate combination comprising a pin having a second hardness less than the first hardness (pin deforms since, inherently, the second hardness is less that the first hardness of the substrate; page numbered 2 at top, lines 8-10, page numbered 3 at top, lines 17-19, page numbered 5 at top, lines 16-18).

As to claim 15, Attorney argues that:

Kerb-Konus-Vertriebs does not disclose a pin and substrate combination *wherein the pin is formed from cylindrical stock having a third diameter and the second diameter is greater than the third diameter.*

Examiner disagrees. As to claim 15, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein the pin comprises a second diameter.

Applicant is reminded that **process limitations are given little patentable weight in product claims**. The patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

As to claim 21, Attorney argues that:

Kerb-Konus-Vertriebs does not disclose a pin comprising an elongated cylindrical body having *a cylindrical pilot portion* and a retainer portion defined by a plurality of alternating helical lands and grooves, *the retaining surface being a radial distance from the axis that is greater than a radius of the pilot portion.*

Examiner disagrees. As to claim 21, Kerb-Konus-Vertriebs discloses a pin comprising an elongated cylindrical body **1** having a cylindrical pilot portion **3,4**, and a retainer portion defined by a plurality of alternating helical lands **5** and grooves **2**, the retaining surface being a radial distance from the axis that is greater than a radius of the pilot portion (Figure 1).

Conclusion

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. The following patents show the state of the art with respect to pins:

Bailey (US 6,692,207) is cited for pertaining to pins comprising cylindrical pilot portions and a plurality of helical lands and grooves.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (571)272-7081. The examiner can normally be reached on M-F (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571)272-7087. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MPF
03/03/06

Daniel P Stodola

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